QUIZ NAVIGATION

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Started on	Friday, 11 October 2024, 5:30 PM
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Grade	**7.00** out of 10.00 (**70%**)

Question 1

ID: 50053

Correct

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LK is a 33-year-old female who presents to your pharmacy with a new prescription for escitalopram 5 mg PO daily x 1 week, then 10 mg PO daily thereafter, and a prescription for lorazepam 1 mg PO TID. LK has no allergies and her only current medication is levothyroxine 100 mcg PO daily which she has been on for 15 years for Hashimoto's thyroiditis. She tells you that she was recently diagnosed with Panic Disorder (PD) after numerous episodes of severe anxiety which have interfered with her daily activities and relationships. She says she wants these symptoms of anxiety to resolve as soon as possible because she would like to plan to become pregnant with her second child soon.

Which of the following statements regarding Benzodiazepines (BZDs) is **FALSE**?

Select one:

- BZDs are second-line options in the treatment of PD ✖
- BZDs are safe in both pregnancy and breastfeeding ✔

Rose Wang (ID:113212) this answer is correct. BZDs should be avoided while breastfeeding, due to the potential of accumulation, sedation, development of oral cleft and impaired temperature regulation in the infant. BZDs may be used in pregnancy but should be avoided in the first trimester.

- BZDs are useful as adjunct therapy early in treatment with Selective Serotonin Reuptake Inhibitors (SSRIs) ✖
- BZDs are associated with withdrawal symptoms and require tapering off slowly ✖

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and related disorders

LEARNING OBJECTIVE:

To understand the role of benzodiazepine therapy in anxiety and related disorders.

BACKGROUND:

An anxiety disorder is defined as persistent, severe feelings of anxiety that lead to irrational fears. This then can hinder a person's day-to-day functioning. There are different types of anxiety disorders, including generalized anxiety disorder, social anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, and panic disorder. Often pharmacological and non-pharmacological measures are used to try and manage anxiety disorder symptoms. The GABA receptors theorized to be involved in the pathogenesis of anxiety disorders can be classified under two major families: GABA-A and GABA-B. The GABA-A is the receptor responsible for producing symptoms of anxiety, while the GABA-B receptor is thought to be involved with the process of GABA release in the body. GABA is the main inhibitory neurotransmitter of the central nervous system which binds to both of these receptors. When GABA binds to GABA-A, there is decreased neuronal excitability, reduced anxiety, and increased sedation that enables better sleep. Although the specific role of the GABA receptors in anxiety disorders has not been established, it is believed that as a result of environmental (e.g. chronic stress) and hormonal changes, the number of GABA-A receptors and how they function can affect how they respond to stimuli. Benzodiazepines act on this GABA-receptor mechanism by increasing the effects of GABA on its receptors, leading to anxiolytic, hypnotic, and anticonvulsive effects. Benzodiazepines (BZDs) such as clonazepam or lorazepam may be used as a short-term (i.e. up to 6 to 8 weeks) treatment alternative if patients are not successful with stress management and relaxation techniques. Benzodiazepines are second-line therapy for the treatment of anxiety and short-term use is recommended due to the increased risks of sedation, dependency, and cognitive impairment associated with long-term use. Patients using BZDs should be advised of potential symptoms of withdrawal such as increased anxiety, insomnia, nausea, or tremors, if discontinued suddenly. Patients may also use BZDs as an adjunctive treatment to provide fast-acting relief of anxiety or panic attacks. They may also be used to mitigate symptoms of anxiety or agitation associated with initiating antidepressants or occasionally during CBT sessions. When antidepressants are initiated or when doses are changed, patients may experience worsened symptoms of anxiety and the medication may take 6 - 8 weeks to be effective. It is important to inform patients to continue treatment with the antidepressant during this period as the worsening symptoms should subside. If stress management and relaxation techniques or short-term BZD use are ineffective to treat anxiety symptoms, and CBT is ineffective or not preferred, pharmacological treatment with Selective Serotonin Reuptake Inhibitors (SSRIs) or Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs) can be considered. If the chosen treatment is effective, it can be continued for 1 to 2 more years with proper monitoring and gradually discontinued if the patient and clinician feel comfortable stopping the medication. BZDs should be avoided while breastfeeding, due to the potential of accumulation, sedation, development of oral cleft, and impaired temperature regulation in the infant. The risk of congenital abnormalities has also been described with prenatal exposure to BZDs, so they should be avoided particularly in the first trimester of pregnancy.

RATIONALE:

Correct Answer:

- **BZDs are safe in both pregnancy and breastfeeding** - BZDs should be avoided while breastfeeding due to the potential risks to the infant and the increased risk of congenital abnormalities associated with prenatal exposure, particularly in the first trimester.

Incorrect Answers:

- **BZDs are second-line options in the treatment of PD due to their side effect profile, but they are often prescribed at the beginning of antidepressant therapy for more immediate relief of symptoms.** - While BZDs are used to provide immediate relief, their side effect profile makes them a second-line option.
- **BZDs may be used as an adjunctive treatment for fast-acting relief of anxiety or panic attacks, or to mitigate symptoms of anxiety or agitation associated with initiating antidepressants.** - BZDs can provide fast-acting relief but should be used cautiously due to potential side effects and dependency issues.
- **Patients using BZDs should be advised of potential symptoms of withdrawal such as increased anxiety, insomnia, nausea, or tremors, if discontinued suddenly.** - It is important to advise patients on the potential withdrawal symptoms associated with sudden discontinuation of BZDs.

TAKEAWAY/KEY POINTS:

BZDs may be used as adjunctive therapy to mitigate symptoms of anxiety or agitation associated with initiating antidepressants. They should be avoided in the first trimester of pregnancy and during breastfeeding. It is important to taper off BZDs when discontinuing to avoid withdrawal symptoms.

REFERENCE:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders. BMC Psychiatry. 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1.
[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: BZDs are safe in both pregnancy and breastfeeding

Question 2

ID: 50057

Correct

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Which of the following medications is correctly paired with its indication?

Select one:

- Fluoxetine is a first-line option in Post-Traumatic Stress Disorder (PTSD) ✔

Rose Wang (ID:113212) this answer is correct. Fluoxetine, paroxetine, sertraline, and venlafaxine are first-line options in PTSD.

- Buspirone is a first-line option in Generalized Anxiety Disorder (GAD) ✖
- Venlafaxine is a first-line option in Obsessive-Compulsive Disorder (OCD) ✖
- Duloxetine is a first-line option for Social Anxiety Disorder (SAD) ✖

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and Related Disorders

LEARNING OBJECTIVE:

Identify which medications are first-line treatment options for specific anxiety-related indications.

BACKGROUND:

The state of anxiety is a natural, transient, and adaptive reaction to real or perceived danger or stressful situations. However, when a person experiences irrational fears and possesses persistent and severe symptoms of anxiety to the point of impaired daily functioning and decreased quality of life, steps should be taken to properly diagnose and treat such symptoms. There are many different anxiety disorders, each with its own diagnostic criteria and treatment options. Social Anxiety Disorder (SAD) (also known as Social Phobia (SP)) Social Phobia (SP) is one of the most common anxiety disorders, with a lifetime prevalence of approximately 8-12% among the international general population. The key features of SP include marked, excessive, or unrealistic fear or anxiety about social situations in which there is possible exposure to judgment by others and active avoidance of feared situations. If the fear is restricted to speaking or performing in public, the disorder should be specified as "performance only". SP can have a negative impact on daily functioning, including in educational and occupational environments, and can place economic burdens on individuals and society in terms of missed work days and health care costs. Patients with SP are also at an increased risk of developing a comorbid psychiatric disorder such as Major Depressive Disorder (MDD), other anxiety and related disorders, avoidant personality disorder, body dysmorphic disorder, substance use disorder, Attention Deficit Hyperactivity Disorder (ADHD), and schizophrenia. First-line pharmacological treatments include escitalopram, fluvoxamine, paroxetine, sertraline, venlafaxine, and pregabalin. Pregabalin can be used as a treatment for SAD only if it is given in higher doses which may cause significant side effects such as drowsiness which can impair daily functioning. Pregabalin is not commonly used as there are other more suitable first-line agents. Second-line pharmacological treatments include alprazolam, clonazepam, bromazepam, citalopram, gabapentin, and phenelzine. Beta-blockers are not generally recommended in the treatment of SAD. However, low doses of propranolol and atenolol have successfully been shown to relieve anxiety caused by performance situations such as public speaking if taken 30 minutes before the event. Generalized Anxiety Disorder (GAD) The key features of GAD include excessive, difficult-to-control anxiety and worry about multiple events or activities, accompanied by symptoms such as restlessness/feeling on edge or muscle tension on more days than not for 6 months. The lifetime prevalence

of GAD is approximately 6%, and is more frequent in Caucasians compared to other groups. GAD is frequently underdiagnosed and undertreated. If it is present with a comorbid medical condition, the symptoms, economic impact, and degree of disability in these patients are more likely to be severe. GAD can have a negative impact on daily functioning and can place an economic burden on individuals and society in terms of missed work days and health care costs. Patients with GAD are also at an increased risk of developing a comorbid psychiatric disorder such as MDD, other anxiety and related disorders, pain syndromes, hypertension, cardiovascular conditions, and gastric conditions. First-line pharmacological treatments include escitalopram, paroxetine, sertraline, venlafaxine, duloxetine, agomelatine, and pregabalin. Pregabalin has the additional advantage of providing a rapid onset of relief (i.e. about one week) compared to SSRIs and SNRIs however its side effect profile significantly limits its use. Second-line pharmacological treatments alprazolam, bromazepam, lorazepam, diazepam, bupropion XL, buspirone, hydroxyzine, imipramine, quetiapine XR, and vortioxetine. Obsessive-Compulsive Disorder (OCD) OCD is defined by the presence of obsessions or compulsions. Obsessions are recurring or intrusive thoughts leading to increased anxiety whereas compulsions are repeating comforting behaviours to decrease anxiety. These obsessions and/or compulsions result in significant impairment to the daily and social functioning of the individual. First-line treatment options for OCD include escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline. Second-line treatment options include citalopram, clomipramine, mirtazapine, and venlafaxine. Post-Traumatic Disorder (PTSD) PTSD is defined as anxiety that is the result of a traumatic life event. First-line treatment options for PTSD include fluoxetine, paroxetine, sertraline, and venlafaxine. Second-line treatment options include fluvoxamine, mirtazapine, and phenelzine.

RATIONALE:

Correct Answer:

- **Fluoxetine is a first-line option in Post-Traumatic Stress Disorder (PTSD)** - Fluoxetine, paroxetine, sertraline, and venlafaxine are first-line options in PTSD.

Incorrect Answers:

- **Buspirone is a first-line option in Generalized Anxiety Disorder (GAD)** - Escitalopram, paroxetine, sertraline, duloxetine, venlafaxine, pregabalin, and agomelatine are first-line options in GAD. Buspirone is a second-line option.
- **Venlafaxine is a first-line option in Obsessive-Compulsive Disorder (OCD)** - Escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline are first-line options in OCD. Venlafaxine is a second-line option.
- **Duloxetine is a first-line option for Social Anxiety Disorder (SAD)** - Escitalopram, fluvoxamine, paroxetine, pregabalin, sertraline, and venlafaxine are first-line options in SAD. Duloxetine is first-line in Generalized Anxiety Disorder (GAD) only.

TAKEAWAY/KEY POINTS:

First-line pharmacological treatments for GAD are escitalopram, paroxetine, sertraline, venlafaxine, duloxetine, agomelatine, and pregabalin. First-line pharmacological treatments for SAD are escitalopram, fluvoxamine, paroxetine, sertraline, venlafaxine, and pregabalin. Fluoxetine, paroxetine, sertraline, and venlafaxine are first-line options for PTSD. Escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline are first-line options for OCD.

REFERENCE:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders. BMC Psychiatry. 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1. [2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Fluoxetine is a first-line option in Post-Traumatic Stress Disorder (PTSD)

Question 3
ID: 50059
Incorrect
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RD is a 67-year-old male patient who was recently diagnosed with Generalized Anxiety Disorder (GAD) after experiencing excessive worrying, restlessness, and muscle tension almost every day for the last 8 months. He has no known allergies. He does not smoke, and drinks, on average, 3 alcoholic drinks per day. His current medications include hydrochlorothiazide 25 mg PO daily for hypertension which has been well-controlled for 5 years, and acetylsalicylic acid (ASA) 81 mg PO daily for primary prevention of Coronary Artery Disease (CAD). After discussing with his physician, RD would like to try pharmacotherapy to manage his symptoms of GAD.

Which of the following statements regarding drug interactions with treatment options for GAD is **INCORRECT**?

Select one:

- Pregabalin should be used with caution due to an interaction with alcohol ✖
- Venlafaxine should be avoided because RD has hypertension ✔
- Sertraline should be used with caution due to the interaction with ASA ✖

Rose Wang (ID:113212) this answer is incorrect. Selective Serotonin Reuptake Inhibitors (SSRIs) (e.g. sertraline) may interact with Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) (e.g. ASA) resulting in an increased risk of bleeding.

- Grapefruit juice should be avoided if RD is prescribed diazepam ✖

Incorrect
Marks for this submission: 0.00/1.00.

TOPIC: Anxiety and Related Disorders

LEARNING OBJECTIVE:

To identify drug interactions of common anxiety medications.

BACKGROUND:

The key features of GAD include excessive, difficult-to-control anxiety and worry about multiple events or activities, accompanied by symptoms such as restlessness/feeling on edge or muscle tension on more days than not for 6 months. The lifetime prevalence of GAD is approximately 6% and is more frequent in Caucasians compared to other groups. GAD is frequently underdiagnosed and undertreated. If it is present with a comorbid medical condition, the symptoms, economic impact, and degree of disability in these patients are more likely to be more severe. GAD can have a negative impact on daily functioning and can place an economic burden on individuals and society in terms of missed work days and health care costs. Patients with GAD are also at an increased risk of developing a comorbid psychiatric disorder such as Major Depressive Disorder (MDD), other anxiety and related disorders, pain syndromes, hypertension, cardiovascular conditions, and gastric conditions. First-line pharmacological treatments are escitalopram, paroxetine, sertraline, venlafaxine, duloxetine, agomelatine, and pregabalin. Pregabalin has the additional advantage of providing a rapid onset of relief (i.e. about one week) compared to SSRIs and SNRIs; however, its side effect profile significantly limits its use. Some common side effects of pregabalin include drowsiness, fatigue, dizziness, ataxia, impaired coordination, impaired vision, headache, tremors, nausea, dry mouth, and peripheral edema. It also carries an increased risk of additive effects with concurrent use of other anticholinergic drugs or CNS depressants such as opioids and alcohol. Second-line pharmacological treatments are alprazolam, bromazepam, lorazepam, diazepam, bupropion XL, buspirone, hydroxyzine, imipramine, quetiapine XR, and vortioxetine. Benzodiazepines (BZDs) may be used as a short-term (i.e. up to 6 to 8 weeks) treatment alternative if patients are not successful with stress management and relaxation techniques. Short-term use is recommended due to the increased risks of sedation, dependency, and cognitive impairment associated with long-term use. Patients using BZDs should be advised of potential symptoms of withdrawal such as increased anxiety, insomnia, nausea, or tremors, if discontinued suddenly. Many benzodiazepines, such as diazepam, are metabolized via CYP enzymes and are subject to interactions with medications that are CYP inhibitors or inducers. Patients may also use BZDs as an adjunctive treatment to provide fast-acting relief of anxiety or panic attacks. They may also be used to mitigate symptoms of anxiety or agitation associated with initiating antidepressants or occasionally during CBT sessions. When antidepressants are initiated or when doses are changed, patients may experience worsened symptoms of anxiety before they start to feel better. It is important to inform patients to continue treatment during this period as the worsening symptoms will subside after a few days. If stress management and relaxation techniques or short-term BZD use are ineffective to treat anxiety symptoms, and CBT is ineffective or not preferred, pharmacological treatment with Selective Serotonin Reuptake Inhibitors (SSRIs) or Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs) can be considered for a trial of 6 to 8 weeks. If the chosen treatment is effective, it can be continued for 1 to 2 years with proper monitoring and gradually discontinued if the patient and clinician feel comfortable stopping the medication. SSRIs and SNRIs have similar side effects associated with their use, including headache, gastrointestinal (GI) complaints, CNS (Central Nervous System) side effects (e.g. insomnia, and drowsiness), sexual dysfunction, fatigue, and weight gain. Among the SSRI drug class, paroxetine is associated with the greatest amount of weight gain and anticholinergic effects. Sexual dysfunction for both SNRIs and SSRIs persists throughout drug therapy whereas GI and CNS side effects wear off after a few weeks of drug therapy. An important consideration is the increased risk of suicidal ideation and behaviours in children and adolescents. Although this has not been seen in adults, it is in the best interests of healthcare providers and patients to ensure there is careful monitoring for evidence of self-harming or suicidal thoughts in pediatric and adult patients. In addition, citalopram and escitalopram have the greatest risk among the SSRI drug class for causing QT prolongation. Other risk factors for QT prolongation include female gender, elderly, bradycardia, electrolyte abnormalities, and use of other QT-prolonging drugs such as ondansetron, domperidone, donepezil, azole antifungals, hydroxychloroquine, among others. Moreover, SNRIs are associated with high blood pressure, especially at elevated doses. Consider alternative options in patients with uncontrolled hypertension. In particular, venlafaxine may cause dose-related hypertension at doses >255 mg. The use of SSRIs and SNRIs has been associated with an increased risk of upper GI bleeding, especially in combination with Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), antiplatelets, and anticoagulants. In addition, patients who have used antidepressants for a minimum of 6 weeks are at risk of antidepressant discontinuation syndrome if the antidepressant is abruptly discontinued. This discontinuation syndrome can present with symptoms such as insomnia, nausea, imbalance, sensory disturbances, and hyperarousal. After a trial of one SSRI or SNRI for 6-8 weeks, patients should be reassessed for symptomatic improvement. If a patient presents with some improvement, the clinician should ensure that the dose is optimized, after which an adjunctive therapy may be added on. However, if the patient presents with no clinical improvement, they should be switched to another SSRI or SNRI.

RATIONALE:

Correct Answer:

- **Venlafaxine is not recommended in uncontrolled hypertension** - RD's hypertension is well-controlled so he may use this medication.

Incorrect Answers:

- **Pregabalin carries an increased risk of additive side effects with concurrent use of CNS depressants** - Pregabalin carries an increased risk of additive side effects with concurrent use of CNS depressants such as opioids and alcohol.
- **SSRIs may interact with NSAIDs resulting in an increased risk of bleeding** - Selective Serotonin Reuptake Inhibitors (SSRIs) (e.g. sertraline) may interact with Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) (e.g. ASA) resulting in an increased risk of bleeding.
- **Diazepam is a substrate of CYP3A4 which is inhibited by grapefruit juice** - This interaction may result in increased serum levels of diazepam.

TAKEAWAY/KEY POINTS:

There are numerous drug interactions that are important to be aware of when patients are starting on new pharmacotherapy for anxiety disorders.

REFERENCES:

[1] Repchinksy C. Benzodiazepines (CPhA Monograph). In: Compendium of Pharmaceuticals and Specialties. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Venlafaxine should be avoided because RD has hypertension

Question 4

ID: 50061

Correct

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Which of the following Tricyclic Antidepressants (TCAs) is **LEAST** likely to cause orthostatic hypotension?

Select one:

- Imipramine ✖
- Clomipramine ✖
- Desipramine ✔ *Rose Wang (ID:113212) this answer is correct. Desipramine is a secondary amine TCA, so it has a lower risk of orthostatic hypotension compared to tertiary amines.*
- Trimipramine ✖

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and Related Disorders

LEARNING OBJECTIVE:

To recognize the incidence of side effects from Tricyclic Antidepressants (TCAs).

BACKGROUND:

The state of anxiety is a natural, transient, and adaptive reaction to real or perceived danger or stressful situations. However, when a person experiences irrational fears and possesses persistent and severe symptoms of anxiety to the point of impaired daily functioning and decreased quality of life, steps should be taken to properly diagnose and treat such symptoms. There are many different anxiety disorders, each with its own diagnostic criteria and treatment options.

Tricyclic Antidepressants (TCAs) are usually reserved as second-line or third-line treatment options for anxiety due to the high number of side effects, high discontinuation rates, and high potential for toxicity in overdose associated with TCAs are second or third line treatments options in Panic Disorder (PD), Obsessive-Convulsive Disorder (OCD), and Generalized Anxiety Disorder (GAD). TCAs include the tertiary amines amitriptyline, clomipramine, doxepin, trimipramine, and imipramine, as well as the secondary amines desipramine and nortriptyline. In supra-therapeutic doses (e.g. in overdose), they are associated with seizures, and cardiac toxicity (e.g. ventricular arrhythmias). The use of TCAs should be re-evaluated in the elderly due to their negative side effect profiles.

Cardiotoxicity and the risk of fatal overdoses are major safety concerns of TCAs. This class should generally be avoided in patients at risk of intentional overdose. Other common side effects of this group of agents include sedation, weight gain, sexual dysfunction, gastrointestinal upset, QT prolongation, and hypotension, along with anticholinergic effects (e.g. dry mouth, orthostatic hypotension, constipation, drowsiness, blurred vision and memory impairment). Of note, the secondary amine TCAs are generally better tolerated, in terms of side effects, compared to the tertiary amines. In particular, desipramine and nortriptyline have fewer anticholinergic side effects and less weight gain than the tertiary amines.

RATIONALE:

Correct Answer:

- **Desipramine** - Desipramine is a secondary amine TCA, so it has a lower risk of orthostatic hypotension compared to tertiary amines.

Incorrect Answers:

- **Imipramine** - Imipramine is a tertiary amine TCA, so it has a higher risk of orthostatic hypotension compared to secondary amines.
- **Clomipramine** - Clomipramine is a tertiary amine TCA, so it has a higher risk of orthostatic hypotension compared to secondary amines.
- **Trimipramine** - Trimipramine is a tertiary amine TCA, so it has a higher risk of orthostatic hypotension compared to secondary amines.

TAKEAWAY/KEY POINTS:

Side effects can vary within the class of Tricyclic Antidepressants (TCAs), with secondary amine TCAs being better tolerated than tertiary amines.

REFERENCE:

[1] CPhA Monograph. Tricyclic Antidepressants. In: Compendium of Pharmaceuticals and Specialties. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Desipramine

Question 5

ID: 50070

A medical resident at your clinic would like to discuss a patient, WM, who has been newly diagnosed with Panic Disorder (PD). WM is a 45-year-old female who has been experiencing recurrent,

Correct

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unexpected panic attacks that are interfering with her responsibilities at home and at work. After discussion with the patient, it was decided that WM will be started on citalopram 10 mg PO daily, with a plan to gradually increase to a target dose of 20 mg PO daily.

Which of the following statements regarding safety and efficacy monitoring parameters for the initiation of citalopram is **FALSE**?

Select one:

- If citalopram effectively manages WM's symptoms, it should be continued for 6 to 9 months ✔

Rose Wang (ID:113212) this answer is correct. If citalopram effectively manages WM's symptoms, a more appropriate timeline for most patients would be to continue the medication for 1 to 2 years.

- Citalopram should be trialled for 6-8 weeks to determine if there has been an improvement in symptoms ✖
- Some side effects of citalopram, such as headache, irritability and drowsiness, may subside after the first 2 weeks of therapy ✖
- Citalopram should be started at a low dose and titrated up to target dose ✖

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and Related Disorders

LEARNING OBJECTIVE:

To recognize the monitoring parameters regarding the treatment of anxiety and related disorders.

BACKGROUND:

The key features of panic disorder include recurrent, unexpected panic attacks in the absence of triggers and persistent concern or changes in behaviour related to the possibility of additional panic attacks. The key features of agoraphobia include marked, unreasonable fear or anxiety about a situation and active avoidance of feared situations due to distressing thoughts. Distressing thoughts include thoughts that escape might be difficult or help will be unavailable if panic-like symptoms occur. Although the diagnostic criteria define panic disorder separately from agoraphobia, panic disorder can develop with or without agoraphobia. The lifetime prevalence of panic disorder has been estimated at approximately 5% and is more prevalent in patients with comorbid medical conditions such as thyroid disease, cancer, and chronic pain. Panic disorder can have a negative impact on daily functioning, and can place physical, emotional, and financial burdens on patients and their families. If panic disorder is present with a comorbid medical condition, the symptoms and degree of disability in these patients are more likely to be severe. Patients with panic disorder have increased:

- Impairment and dissatisfaction with their quality of life
- Likelihood of suicide attempts
- Cognitive and emotional dysfunction

In general, patients with anxiety disorders who have started drug therapy should be started on the lowest dose possible, then the dose should be titrated to the maximum tolerated dose. Once patients reach a therapeutic code, they should continue to be monitored for adverse effects and treatment efficacy. Follow-up monitoring, after the dose is stabilized, should occur every one to two weeks for the first six weeks and then every four weeks. During this time, persistent and bothersome side effects such as sexual dysfunction and weight gain may be observed. Closer monitoring may be required in special populations such as young children, elderly patients, and patients who are pregnant. It is important to counsel patients on the onset of symptom relief and potential side effects when initiating pharmacological treatments for anxiety. It is common to experience a delay of about two to eight weeks before experiencing any kind of symptom relief. One exception to this is when using pregabalin, which has shown a faster onset of symptom relief than other treatments for anxiety disorders. Therefore, trials of 6-8 weeks are recommended when initiating an SSRI or SNRI in order to properly assess for symptom relief before continuing for a longer period. If a patient has not experienced any relief during the trial period, a switch to another first-line SSRI or SNRI is recommended. If there is partial relief during the trial period, the dose may be increased or adjuvant therapy may be recommended. If a chosen pharmacological treatment is effective, the patient should continue the treatment for 1 to 2 years with proper monitoring. For SSRIs, it is also common to experience side effects such as headache, irritability, and drowsiness during the first two weeks of treatment. However, these side effects are normally transient and should decrease as the drug is tolerated over time. Each therapy is individualized and is tailored depending on the patient's response to treatment. Ensuring that the patient is aware of treatment timelines and expectations moving forward can increase patient adherence to therapy. If the chosen pharmacological treatment is effective, it can be continued for 1 to 2 more years with proper monitoring and gradually discontinued if the patient and clinician feel comfortable stopping the medication.

RATIONALE:

Correct Answer:

- **Continue the medication for 1 to 2 years** - If citalopram effectively manages WM's symptoms, a more appropriate timeline for most patients would be to continue the medication for 1 to 2 years.

Incorrect Answers:

- **6-8 weeks** - 6-8 weeks is an appropriate timeline for evaluating the efficacy of Selective Serotonin Reuptake Inhibitors (SSRIs).
- **Headache, irritability, and drowsiness** - Headache, irritability, and drowsiness are common side effects of citalopram that are usually transient and should subside as the drug is tolerated

- **Start on the lowest dose possible** - Pharmacological therapy should be started on the lowest dose possible, then the dose should be titrated to the maximum tolerated dose.

TAKEAWAY/KEY POINTS:

First-line SSRIs should be started at a low dose and trialed for 6-8 weeks to assess for efficacy and side effects. Some of the common side effects, such as headache, irritability, and drowsiness, may subside after 2 weeks of therapy. If the treatment is effective, it may be continued for 1-2 years, but if it is not effective, the dose should be optimized or the medication should be switched to an alternative first-line option.

REFERENCE:

[1] Selective Serotonin Reuptake Inhibitors (SSRIs). In: RxTX. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: If citalopram effectively manages WM's symptoms, it should be continued for 6 to 9 months

Question 6

ID: 50074

Incorrect

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A physician at your clinic will be meeting with SM, a 47-year-old male who is looking to discuss treatment for Obsessive Compulsive Disorder (OCD). During the COVID pandemic, he started wiping his groceries to ensure he would not catch COVID. Despite watching an interview with a reputable scientist on the news disproving this theory and confirming that COVID could not be transmitted via grocery packaging, he continues to do this. He showers multiple times a day to ensure he is clean and his water bill is becoming unaffordable. He knows he has a problem but does not know how to solve it. His family tells him to simply 'shower less' and to 'just don't wipe your groceries' but he finds he can't. He tried to not wipe his groceries once but felt like his fridge was contaminated so he took everything out and wiped the food and fridge down to be sure they were clean. He lives in a small rural community and has to drive 1 hour to get to the nearest city where he could have therapy.

SM does not have any medical conditions, but he did come from an abusive home. He has no known allergies. He works as a computer programmer from home and prefers to stay home as much as possible.

All of the following statements are true **EXCEPT**:

Select one:

- Escitalopram is an appropriate first-line drug therapy option for treating SM's OCD ✖
- Citalopram is an appropriate second-line drug therapy option for treating SM's OCD ✖
- Cognitive behavioural therapy (CBT) should not be recommended to SM because he lives far from the city ✔
- Showering less often is a reasonable goal of therapy for SM ✖

Rose Wang (ID:113212) this answer is incorrect. Showering less often is a reasonable goal of therapy for SM.

Incorrect

Marks for this submission: 0.00/1.00

TOPIC: Anxiety Disorders

LEARNING OBJECTIVE:

To recognize goals of therapy in patients with OCD as well as determine reasonable treatment options.

BACKGROUND:

OCD can be caused by various factors such as genetics, neurobiological factors, hormones, infections and stress. It generally starts in childhood/adolescence. Patients usually present with both obsessions and compulsions. Obsessions are repetitive, disturbing thoughts, images or urges that are hard to ignore. Compulsions are feelings of having to do something even if the person does not want to or it doesn't make sense to. These compulsions can take up a significant amount of time in a person's life and affect their ability to carry out normal activities. DSM 5 Diagnostic Criteria: Presence of obsessions, compulsions or both The individual attempts to ignore/suppress/neutralize the thoughts The obsessions or compulsions are time consuming or cause significant distress/impairment in daily living The symptoms cannot be explained by another mental illness or physiological disturbance Cognitive Behavioural Therapy (CBT) is usually the first-line treatment option as the beneficial effects last long after therapy has stopped. This contrasts with drug therapy benefits which usually end when the drug is stopped. First-line drug therapy options are escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline. Second-line drug therapy options are citalopram, clomipramine, mirtazapine, and venlafaxine. CBT and drug therapy are better than medication alone but are not better than CBT alone.

RATIONALE:

Correct Answer:

- **Cognitive Behavioural Therapy (CBT) should not be recommended to SM because he lives far from the city** - Cognitive Behavioural Therapy (CBT) is the most appropriate first-line treatment for SM and should be recommended as the beneficial effects last long after therapy has stopped.

Incorrect Answers:

- **Escitalopram is an appropriate first-line drug therapy option for treating SM's OCD** - Paroxetine, escitalopram, fluoxetine, fluvoxamine, and sertraline are all appropriate first-line drug therapy options for treating SM's OCD.

- **Citalopram is an appropriate second-line drug therapy option for treating SM's OCD** - Citalopram, clomipramine, mirtazapine, and venlafaxine are all appropriate second-line drug therapy options for treating SM's OCD.
- **Showering less often is a reasonable goal of therapy for SM** - Showering less often is not a reasonable goal of therapy for SM.

TAKEAWAY/KEY POINTS:

Cognitive Behavioural Therapy (CBT) is the most appropriate first-line treatment for OCD as the beneficial effects last long after therapy has stopped. This is in contrast with drug therapy benefits which usually end when the drug is stopped.

REFERENCE:

[1] Zigman D and Sookman D. Obsessive Compulsive Disorder. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacy Association. https://myrxtx.ca. [2] Katzman, MA, Bleau, P, Blier, P, Chokka, P, Kjernisted, K, Ameringen, MV. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders. BMC Psychiatry. 2014;14(Suppl 1).

The correct answer is: Cognitive behavioural therapy (CBT) should not be recommended to SM because he lives far from the city

Question 7
ID: 50073
Incorrect
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FV, a 55-year-old male, complains of having frequent heart palpitations, difficulty breathing, and a general sense of panic for no apparent reason for the past several months. FV says these "episodes" happen at random, and nothing specific brings them on. He says he is constantly afraid of when it'll happen again. FV is diagnosed with mild Panic Disorder (PD). His current medications are tramadol/acetaminophen 37.5mg/325mg one tablet PO daily for a back injury (started 6 months prior) and cyclobenzaprine 10mg - 1 tablet PO BID for a back injury (started 6 months prior). He is not currently experiencing any side effects from his medications.

Which of the following treatment options is the best option to treat FV's Panic Disorder?

Select one:

- Citalopram ✖ *Rose Wang (ID:113212) this answer is incorrect. This is not the best option as FV is already on 2 serotonergic medications and adding a third one may induce serotonin syndrome.*
- Imipramine ✖
- Venlafaxine ✖
- Psychotherapy ✔

Incorrect
Marks for this submission: 0.00/1.00.

TOPIC: Anxiety and related disorders

LEARNING OBJECTIVE:

To understand serotonin syndrome and the impact of interactions between multiple serotonergic drugs.

BACKGROUND:

Serotonin syndrome occurs when there is an over-activation of serotonin receptors. This can happen with the use of multiple serotonergic drugs. Symptoms of serotonin syndrome include agitation, tremors, stiff muscles, sweating, increased body temperature, diarrhea, etc. Some examples of serotonergic drugs include:

- SSRIs (selective serotonin reuptake inhibitors)
- SNRIs (selective serotonin and norepinephrine reuptake inhibitors)
- TCAs (tricyclic antidepressants)
- Cyclobenzaprine
- Tramadol

Clinicians should be wary of adding on multiple serotonergic drugs, as this could precipitate serotonin syndrome. Psychotherapy is as effective as drug therapy for managing panic disorder and can be an effective option in patients already on many serotonergic drugs.

RATIONALE:

Correct Answer:

- **Psychotherapy** - Psychotherapy is not only effective in panic disorder, but it is also the safest option for FV as there is no increased risk of serotonin syndrome.

Incorrect Answers:

- **Citalopram** - This is not the best option as FV is already on 2 serotonergic medications and adding a third one may induce serotonin syndrome.
- **Imipramine** - This is not the best option as FV is already on 2 serotonergic medications and adding a third one may induce serotonin syndrome.

- **Venlafaxine** - This is not the best option as FV is already on 2 serotonergic medications and adding a third one may induce serotonin syndrome.

TAKEAWAY/KEY POINTS:

Serotonin syndrome can be precipitated when multiple serotonergic drugs are started on a patient.

REFERENCE:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders. BMC Psychiatry. 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1.

[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Psychotherapy

Question 8

ID: 50106

Correct

Flag question

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THE NEXT THREE QUESTIONS INCLUSIVE REFER TO THE FOLLOWING CASE:

PN is a 24-year-old female that has been diagnosed with Social Anxiety Disorder (SAD). PN gets extremely overwhelmed with anxiety when she has to talk in front of a group of individuals. PN works as a marketing specialist so she is often finding herself in these anxiety-producing situations. PN gets severe menstrual pain each month and takes ibuprofen 400 mg 1-2 tabs Q6H PRN during this time to help control the pain. PN also takes Alesse® (ethinylestradiol/levonorgestrel) birth control which she takes daily for three weeks, followed by one week of no birth control. Additionally, she takes sumatriptan 50mg at the onset of migraine. PN has an allergy to sulfamethoxazole/trimethoprim which causes her to break out into hives.

Which of the following is an appropriate first-line treatment option for PN's SAD?

Select one:

- Paroxetine ✔ *Rose Wang (ID:113212) this answer is correct. Paroxetine is an appropriate first-line treatment for SAD.*
- Amitriptyline ✖
- Vortioxetine ✖
- Buproprion ✖

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and related disorders

LEARNING OBJECTIVE:

To recognize the first-line treatments of social anxiety disorder.

BACKGROUND:

The state of anxiety is a natural, transient, and adaptive reaction to real or perceived danger or stressful situations. However, when a person experiences irrational fears and possesses persistent and severe symptoms of anxiety to the point of impaired daily functioning and decreased quality of life, steps should be taken to properly diagnose and treat these symptoms. There are many different anxiety disorders, each with its own diagnostic criteria. An anxiety disorder is persistent, severe feelings of anxiety that lead to irrational fears. This then can hinder a person's day-to-day functioning. Anxiety disorders include:

- Separation anxiety disorder
- Selective mutism
- Specific phobias
- Social anxiety disorder or Social Phobia (SP)
- Panic Disorder (PD)
- Agoraphobia
- Generalized Anxiety Disorder (GAD)
- Anxiety disorder due to another medical condition
- Substance/medication-induced anxiety disorder
- Other specified anxiety disorder
- Unspecified anxiety disorder

Although the pathophysiology of anxiety disorders can't be attributed to one single cause, there are many theories and associations that can describe the key neurotransmitters and brain areas involved with their development. The neurotransmitters thought to be involved in the pathophysiology of anxiety include norepinephrine (NE), serotonin (5-HT), gamma aminobutyric acid (GABA) and dopamine. Anxiety disorders are among the most common psychiatric illnesses with a lifetime prevalence as high as 31%. An anxiety disorder may present as an isolated diagnosis or in association with comorbid mood disorders, but they are often underdiagnosed and undertreated. In general, women are more likely than men to suffer from anxiety

disorders. Other risk factors that may contribute to the development of an anxiety disorder include:

- Family or personal history of anxiety or mood disorders
- Stressful childhood life events or trauma
- Poverty, unemployment
- Isolation or loneliness
- Female gender
- Chronic illnesses such as cardiovascular disease or diabetes
- Drug causes

In terms of age of onset, separation anxiety disorders and phobias are more likely to appear earlier in childhood years (i.e. between 7 and 14 years of age), while panic disorders and generalized anxiety disorders are more likely to appear in the later years of life (i.e. between 25 and 50 years of age). Obsessive compulsive disorder arises more commonly in adolescence or as a young adult. Anxiety symptoms may also occur as a result of experiencing withdrawal from certain medications. Examples of medications that can lead to withdrawals include antidepressants and benzodiazepines (BZDs). Therefore, it is important to counsel on the importance of adhering to the prescribed treatment and to consult healthcare providers before discontinuing any medications. Clinical presentation of anxiety includes the following symptoms for at least 6 months:

- Worries that are difficult to control
- Feeling on-edge
- Poor concentration or mind going blank
- Restlessness
- Fatigue
- Muscle tension
- Sleep disturbances
- Irritability
- Impairment with social, occupational, or other areas
- Poor coping abilities

Screening for anxiety symptoms can provide clinicians with a baseline assessment of symptoms and help clinicians seek further assessment for patients in whom they suspect an anxiety disorder. In addition, risk factors such as family or personal history of anxiety or mood disorders, and socioeconomic environments (e.g. loneliness, low education, traumatic childhood, etc.) are associated with the development of anxiety, and should increase clinical suspicion if they are present. The following general questions may be used for screening:
During the past two weeks how much have you been bothered by the following problems?

- Feeling nervous, anxious, frightened, worried, or on edge
- Feeling panic or being frightened
- Avoiding situations that make you anxious

If an additional assessment is warranted based on clinical judgement, be sure to consider differential diagnoses as well. Anxiety symptoms can present with other psychiatric disorders, secondary to another medical condition, or secondary to substance/medication use or withdrawal. Thus it is important to do a thorough patient history in order to try and rule out other possible causes. The following lab values may be useful for baseline laboratory investigations and ruling out potential medical or substance/drug causes of the patient's anxiety symptoms:

- Basic lab tests
  - Complete blood count
  - Fasting glucose
  - Fasting lipid profile (TC, vLDL, LDL, HDL, TG)
  - Thyroid-stimulating hormone
  - Electrolytes
  - Liver enzymes
- If warranted
  - Urinalysis (urine toxicology) for substance use

Social Anxiety Disorder

Social Anxiety Disorder (SAD) occurs when there is intense anxiety in a social or performance situation that could cause embarrassment. This disorder is often present in childhood and continues into adulthood.

Non-pharmacological treatments include Cognitive Behavioural Therapy (CBT), exposure therapy, and mindfulness therapy.

The treatment of choice for SAD is SSRIs and SNRIs. Escitalopram, fluvoxamine, paroxetine, sertraline, venlafaxine and pregabalin are all first-line options in the treatment of SAD. The SSRIs and SNRIs also treat other comorbid anxiety or depression conditions the patient may have. Pregabalin may have some efficacy but only at doses over 600 mg daily, which increases the risk of adverse effects.

Phenelzine is a second-line agent due to its associated precautions and risks. Gabapentin can potentially be

used in patients not responding to first-line agents. Benzodiazepines such as clonazepam and bromazepam have some efficacy but are associated with risks.

Low-dose propranolol or atenolol taken 30 - 60 minutes before anxiety-provoking events reduce stage fright but these medications do not treat SAD.

RATIONALE:

Correct Answer:

- **Paroxetine** - Paroxetine is an appropriate first-line treatment for SAD.

Incorrect Answers:

- **Amitriptyline** - Amitriptyline is not a first-line treatment option for SAD.
- **Vortioxetine** - Vortioxetine is not a first-line treatment option for SAD.
- **Bupropion** - Bupropion is not a first-line treatment option for SAD.

TAKEAWAY/KEY POINTS:

The treatment of choice for SAD is SSRIs and SNRIs. Citalopram, escitalopram, fluvoxamine, paroxetine, sertraline, and venlafaxine have all shown efficacy in the treatment of SAD.

REFERENCE:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders. *BMC Psychiatry.* 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1.
[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Paroxetine

Question 9

ID: 50112

Correct

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Which of the following is an important counseling point for PN?

Select one:

- To stop paroxetine immediately if she notices any side effects ✖
- That paroxetine can reduce the efficacy of PN's birth control ✖
- To increase the dose of paroxetine by 12.5 mg every day until at a dose of 100 mg ✖
- That PN is at an increased risk of serotonin syndrome when using paroxetine with sumatriptan ✔

Rose Wang (ID:113212) this answer is correct. SSRIs in combination with triptans can lead to serotonin syndrome.

Correct

Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and related disorders

LEARNING OBJECTIVE:

To recognize the drug interactions associated with selective serotonin reuptake inhibitors (SSRIs) and serotonin and norepinephrine reuptake inhibitors (SNRIs).

BACKGROUND:

The state of anxiety is a natural, transient, and adaptive reaction to real or perceived danger or stressful situations. However, when a person experiences irrational fears and possesses persistent and severe symptoms of anxiety to the point of impaired daily functioning and decreased quality of life, steps should be taken to properly diagnose and treat these symptoms. There are many different anxiety disorders, each with its own diagnostic criteria.
Anxiety disorders include:

- Separation anxiety disorder
- Selective mutism
- Specific phobias
- Social anxiety disorder or Social Phobia (SP)
- Panic Disorder (PD)
- Agoraphobia
- Generalized Anxiety Disorder (GAD)
- Anxiety disorder due to another medical condition
- Substance/medication-induced anxiety disorder
- Other specified anxiety disorder
- Unspecified anxiety disorder

Although the pathophysiology of anxiety disorders can't be attributed to one single cause, there are many theories and associations that can describe the key neurotransmitters and brain areas involved with their development. The neurotransmitters thought to be involved in the pathophysiology of anxiety include norepinephrine (NE), serotonin (5-HT), gamma aminobutyric acid (GABA) and dopamine.
Anxiety disorders are among the most common psychiatric illnesses with a lifetime prevalence as high as 31%. An anxiety disorder may present as an isolated diagnosis or in association with comorbid mood disorders, but they are often underdiagnosed and undertreated. In general, women are more likely than men to suffer from anxiety disorders. Other risk factors that may contribute to the development of an anxiety disorder include:

- Family or personal history of anxiety or mood disorders
- Stressful childhood life events or trauma
- Poverty, unemployment
- Isolation or loneliness
- Female gender
- Chronic illnesses such as cardiovascular disease or diabetes
- Drug causes

In terms of age of onset, separation anxiety disorders and phobias are more likely to appear earlier in childhood years (i.e. between 7 and 14 years of age), while panic disorders and generalized anxiety disorders are more likely to appear in the later years of life (i.e. between 25 and 50 years of age). Obsessive compulsive disorder arises more commonly in adolescence or as a young adult.
Anxiety symptoms may also occur as a result of experiencing withdrawal from certain medications. Examples of medications that can lead to withdrawals include antidepressants and benzodiazepines (BZDs). Therefore, it is important to counsel on the importance of adhering to the prescribed treatment and to consult healthcare providers before discontinuing any medications.
Clinical presentation of anxiety includes the following symptoms for at least 6 months:

- Worries that are difficult to control
- Feeling on-edge

Screening for anxiety symptoms can provide clinicians with a baseline assessment of symptoms and help clinicians seek further assessment for patients in whom they suspect an anxiety disorder. In addition, risk factors such as family or personal history of anxiety or mood disorders, and socioeconomic environments (e.g. loneliness, low education, traumatic childhood, etc.) are associated with the development of anxiety, and should increase clinical suspicion if they are present. The following general questions may be used for screening:
During the past two weeks how much have you been bothered by the following problems:

- Feeling nervous, anxious, frightened, worried, or on edge
- Feeling panic or being frightened
- Avoiding situations that make you anxious

If an additional assessment is warranted based on clinical judgement, be sure to consider differential diagnoses as well. Anxiety symptoms can present with other psychiatric disorders, secondary to another medical condition, or secondary to substance/medication use or withdrawal. Thus it is important to do a thorough patient history in order to try and rule out other possible causes.
The following lab values may be useful for baseline laboratory investigations and ruling out potential medical or substance/drug causes of the patient's anxiety symptoms:
Basic lab tests:

- Complete blood count

During the past two weeks how much have you been bothered by the following problems:

- Feeling nervous, anxious, frightened, worried, or on edge
- Feeling panic or being frightened
- Avoiding situations that make you anxious

If an additional assessment is warranted based on clinical judgement, be sure to consider differential diagnoses as well. Anxiety symptoms can present with other psychiatric disorders, secondary to another medical condition, or secondary to substance/medication use or withdrawal. Thus it is important to do a thorough patient history in order to try and rule out other possible causes.
The following lab values may be useful for baseline laboratory investigations and ruling out potential medical or substance/drug causes of the patient's anxiety symptoms:
Basic lab tests:

- Complete blood count
- Fasting glucose
- Fasting lipid profile (TC, vLDL, LDL, HDL, TG)
- Thyroid-stimulating hormone
- Electrolytes
- Liver enzymes

If warranted:

- Urinalysis (urine toxicology) for substance use

RATIONALE:

Correct Answer:

- **That PN is at an increased risk of serotonin syndrome when using paroxetine with sumatriptan** - SSRIs in combination with triptans can lead to serotonin syndrome.

Incorrect Answers:

- **To stop paroxetine immediately if she notices any side effects** - Stopping SSRIs abruptly can lead to withdrawal symptoms and is not recommended without speaking to a physician first.
- **That paroxetine can reduce the efficacy of PN's birth control** - Paroxetine does not interact with PN's birth control.
- **To increase the dose of paroxetine by 12.5 mg every day until at a dose of 100 mg** - SSRIs should not be titrated daily. the titration should happen more gradually.

TAKEAWAY/KEY POINTS:

Both SSRIs and SNRIs carry a risk of inducing serotonin syndrome. Serotonin syndrome can occur when SSRIs or SNRIs are used in combination with other medications that increase serotonin in the body such as triptans, dextromethorphan, TCAs, meperidine, and tryptophan.

REFERENCE:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders. *BMC Psychiatry.* 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1.
[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: That PN is at an increased risk of serotonin syndrome when using paroxetine with sumatriptan

Question 10
ID: 50114
Correct
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It has been 3 months and PN has not noticed any improvement in her SAD. PN's paroxetine has been titrated to the target dose.

Which of the following is an appropriate treatment option for PN?

Select one:

- Add pregabalin to paroxetine ✖
- Add risperidone to paroxetine ✖
- Taper off of paroxetine and start venlafaxine ✔ *Rose Wang (ID:113212) this answer is correct. Since paroxetine is not improving PN's SAD, tapering off one first-line agent and starting another first-line agent would be appropriate.*
- Taper off of paroxetine and start moclobemide ✖

Correct
Marks for this submission: 1.00/1.00.

TOPIC: Anxiety and related disorders

LEARNING OBJECTIVE:

To recognize the treatment options for Social Anxiety Disorder (SAD).

BACKGROUND:

The state of anxiety is a natural, transient, and adaptive reaction to real or perceived danger or stressful situations. However, when a person experiences irrational fears and possesses persistent and severe symptoms of anxiety to the point of impaired daily functioning and decreased quality of life, steps should be taken to properly diagnose and treat these symptoms. There are many different anxiety disorders, each with its own diagnostic criteria. An anxiety disorder is persistent, severe feelings of anxiety that lead to irrational fears. This then can hinder a person's day-to-day functioning. Anxiety disorders include: Social Anxiety Disorder or Social Phobia (SP), Panic Disorder (PD), Agoraphobia, Generalized Anxiety Disorder (GAD), Anxiety disorder due to another medical condition, Substance/medication-induced anxiety disorder, Other specified anxiety disorder, Unspecified anxiety disorder. Although the pathophysiology of anxiety disorders can't be attributed to one single cause, there are many theories and associations that can describe the key neurotransmitters and brain areas involved with their development. The neurotransmitters thought to be involved in the pathophysiology of anxiety include norepinephrine (NE), serotonin (5-HT), gamma aminobutyric acid (GABA) and dopamine. Anxiety disorders are among the most common psychiatric illnesses with a lifetime prevalence as high as 31%. An anxiety disorder may present as an isolated diagnosis or in association with comorbid mood disorders, but they are often underdiagnosed and undertreated. In general, women are more likely than men to suffer from anxiety disorders. Other risk factors that may contribute to the development of an anxiety disorder include: Family or personal history of anxiety or mood disorders, Stressful childhood life events or trauma, Poverty, unemployment, Isolation or loneliness, Female gender, Chronic illnesses such as cardiovascular disease or diabetes, Drug causes. In terms of age of onset, separation anxiety disorders and phobias are more likely to appear earlier in childhood years (i.e. between 7 and 14 years of age), while panic disorders and generalized anxiety disorders are more likely to appear in the later years of life (i.e. between 25 and 50 years of age). Obsessive compulsive disorder arises more commonly in adolescence or as a young adult. Anxiety symptoms may also occur as a result of experiencing withdrawal from certain medications. Examples of medications that can lead to withdrawals include antidepressants and benzodiazepines (BZDs). Therefore, it is important to counsel on the importance of adhering to the prescribed treatment and to consult healthcare providers before discontinuing any medications. Clinical presentation of anxiety includes the following symptoms for at least 6 months: Worries that are difficult to control, Feeling on-edge, Poor concentration or mind going blank, Restlessness, Fatigue, Muscle tension,

Sleep disturbances, Irritability, Impairment with social, occupational, or other areas, Poor coping abilities. Screening for anxiety symptoms can provide clinicians with a baseline assessment of symptoms and help clinicians seek further assessment for patients in whom they suspect an anxiety disorder. In addition, risk factors such as family or personal history of anxiety or mood disorders, and socioeconomic environments (e.g. loneliness, low education, traumatic childhood, etc.) are associated with the development of anxiety, and should increase clinical suspicion if they are present. The following general questions may be used for screening: During the past two weeks how much have you been bothered by the following problems? Feeling nervous, anxious, frightened, worried, or on edge, Feeling panic or being frightened, Avoiding situations that make you anxious. If an additional assessment is warranted based on clinical judgement, be sure to consider differential diagnoses as well. Anxiety symptoms can present with other psychiatric disorders, secondary to another medical condition, or secondary to substance/medication use or withdrawal. Thus it is important to do a thorough patient history in order to try and rule out other possible causes. The following lab values may be useful for baseline laboratory investigations and ruling out potential medical or substance/drug causes of the patient's anxiety symptoms: Basic lab tests: Complete blood count, Fasting glucose, Fasting lipid profile (TC, vLDL, LDL, HDL, TG), Thyroid-stimulating hormone, Electrolytes, Liver enzymes. If warranted: Urinalysis (urine toxicology) for substance use.

RATIONALE:

Correct Answer:

- **Taper off of paroxetine and start venlafaxine** - Since paroxetine is not improving PN's SAD, tapering off one first-line agent and starting another first-line agent would be appropriate.

Incorrect Answers:

- **Add pregabalin to paroxetine** - Pregabalin has to be used in high doses to treat SAD and it is not recommended as an add-on therapy.
- **Add risperidone to paroxetine** - Risperidone is not efficacious in the treatment of SAD.
- **Taper off of paroxetine and start moclobemide** - Moclobemide is not efficacious in the treatment of SAD.

TAKEAWAY/KEY POINTS:

If one first-line treatment option does not work for the treatment of SAD, taper off of the treatment while starting another first-line agent.

REFERENCES:

[1] Katzman MA, Bleau P, Blier P, Chokka P, Kjernisted K, Van Ameringen M. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress, and obsessive-compulsive disorders. *BMC Psychiatry.* 2014;14(1):1-83. doi:10.1186/1471-244X-14-S1-S1. http://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-14-S1-S1.
[2] Dion N and Filteau M. Anxiety Disorders. In: Compendium of Therapeutic Choices. Ottawa, ON: Canadian Pharmacists Association. https://myrxtx.ca.

The correct answer is: Taper off of paroxetine and start venlafaxine

Finish review